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HOUSEKEEPERS' CHAT

Friday, July 9, 1937

(FOR BROADCAST USE ONLY)

Subject: "DIAGNOSING JELLY FAILURES." Information from the Bureau of Home Economics, U. S. Department of Agriculture.

--ooOoo--

A jelly clinic is what we have scheduled for this broadcast period. Yes, I said jelly clinic. Before me I have a lineup of dishes of jelly. And some of them are pretty sorry looking cases, I must say. So I've called several doctors into consultation over them, and together they have diagnosed these jelly ailments. These doctors weren't Doctors of Medicine, of course. One had her doctor's degree through research in chemistry of foods. The others had their degrees in foods and nutrition. The nice thing about these doctors is that they are not only scientists but also good jelly makers.

So on with the clinic.

Case 1 is a brilliant red-pink crabapple jelly, but it has had a bad attack of sugar crystals. Well our scientist doctors say that sugar crystals may be symptoms of any one or more fundamental defects in jelly-making methods. If the cook used too much sugar the jelly might develop these objectionable crystals. Or sometimes crystals come because of too little acid in the fruit. Thirdly, they may be due to overcooking the jelly. And lastly sugar crystals may result from waiting too long to seal the jelly. We cross-questioned the young bride who made this particular crabapple jelly, and discovered that she had overcooked hers.

Case 2 is a Concord grape jelly of a deep purple hue. But it has developed cream of tartar crystals. Now cream of tartar crystals in jelly are not harmful but they certainly do spoil the texture. I've never happened to encounter it in a wild grape jelly, but the Concord family does seem to inherit a tendency to this affliction. There are two ways to prevent such crystals forming. After you have extracted the juice, let it stand overnight in a cold place, so the crystals can form. Then the next morning carefully dip out the juice. The crystals will have settled to the bottom or clung to the sides. Re-strain your dipped-out juice, and go ahead with your jelly. Or you may can the juice and make it into jelly some months later, after the crystals have had time to settle out.

Case 3, before me, is a dish of weeping jelly - you know, the kind that oozes out liquid. It's a clear light red currant jelly that is so troubled. Well, this case had the scientists shaking their heads in doubt. Nobody knows exactly what makes the jelly mass contract and squeeze out liquid. We do know that it occurs only with fruits that are rich both in acid and in pectin. Currant and cranberry jellies are the most likely to develop this ailment.

Case 4 is another crabapple jelly. Nice flavor it has. But it is not quite a perfect product, because it is cloudy. Evidently it wasn't properly strained. If the cook had strained the juice twice, the jelly would have been perfectly clear. But there would have been fewer glasses of jelly! And the thrifty housewife would probably rather have the additional glass of jelly, even if her product was a bit cloudy. For home use at least. It's a different matter if she is out to get a prize at the county fair!

Case 5 is a blackberry jelly that just never jellied. It's a most unattractive gummy mass. And that's what you'll get when you cook a jelly so long that you destroy all the pectin in it!

Case 6 is another blackberry case where the cook just never got jelly. We cross-examined her and found that she had covered the berries with water when she boiled them to get the juice. Our scientists fairly groaned when they heard that. Soft fruits like blackberries should NEVER be boiled in water to cover, they said in a chorus. You can extract the juice from them without adding any water.

Failure to get a fruit juice to form jelly is always caused by an improper balance of the 3 jelly essentials: pectin, acid, and sugar. There are few fruits that lack sufficient acid, if they are taken before they get too ripe.

And sugar will generally be present in the right proportions if directions given by home economists are followed. An excess of sugar most often comes about when the cook uses too much water in the extraction of the juice. Then she'll get a juice where the fruit constituents are much watered down. Well, the recipe may say to take a cup of sugar for each cup of juice. And since she has that particular lot of juice much watered down, what she will do is to add a cup of sugar for each cup of juice and water mixture. By the time all that extra amount of water is boiled out, the sugar is almost sure to be out of proportion to the pectin and acid.

Of course when you have a firm fruit like apples you have to use about a cup of water to the pound of prepared fruit. With currants and gooseberries, not more than 1/4 cup of water to the pound of berries. And with soft blackberries and red raspberries no water at all. Whatever amount of water you add to fruit to extract the juice you have to boil out when you make the jelly. And the larger the amount of water, the longer you have to boil. And the longer you boil, the more pectin you destroy. It's a vicious circle. For presently you haven't enough pectin left to form jelly.

Case 7 in our jelly clinic is another blackberry case. Only this time we have a runny mass instead of a gummy one. Well, here the trouble was undoubtedly undercooking. The cook was afraid that she'd boil the juice too long, and the result was that she didn't boil it enough to arrive at the proper concentration of sugar and fruit constituents.

And that's the last case in our jelly clinic. We've run the gamut from sugar crystals and cream of tartar crystals on through all the types of failure to form jelly. And we've given you the scientists' analyses of causes.

The perfect jelly is tender, firm enough to have body, yet yielding enough to quiver when the dish containing it is moved. It retains the color and flavor characteristic of the fruit from which it was made. That's the type of jelly we all hope to achieve!

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